

# **Operating under Fire:**

The Effects of Explosive Weapons on  
Health Care in the East of Ukraine

Harvard Law School International Human Rights Clinic and PAX



INTERNATIONAL HUMAN RIGHTS CLINIC  
HUMAN RIGHTS PROGRAM AT HARVARD LAW SCHOOL



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## Cover Illustration

Empty beds and stretchers line a hallway in Avdiivka City Hospital, where damage from the use of explosive weapons has hindered the provision of health care.

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## About the Harvard Law School International Human Rights Clinic

The International Human Rights Clinic (IHRC) at Harvard Law School seeks to protect and promote human rights and international humanitarian law through documentation; legal, factual, and strategic analysis; litigation before national, regional, and international bodies; treaty negotiations; and policy and advocacy initiatives.

[hrp.law.harvard.edu/](http://hrp.law.harvard.edu/)

## About PAX

PAX means peace. PAX works with committed citizens and partners to protect civilians in conflict, to end armed violence, and to build peace. PAX operates independently of political interests.

[www.paxforpeace.nl](http://www.paxforpeace.nl)

## Satellite Images

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Tutaev Design

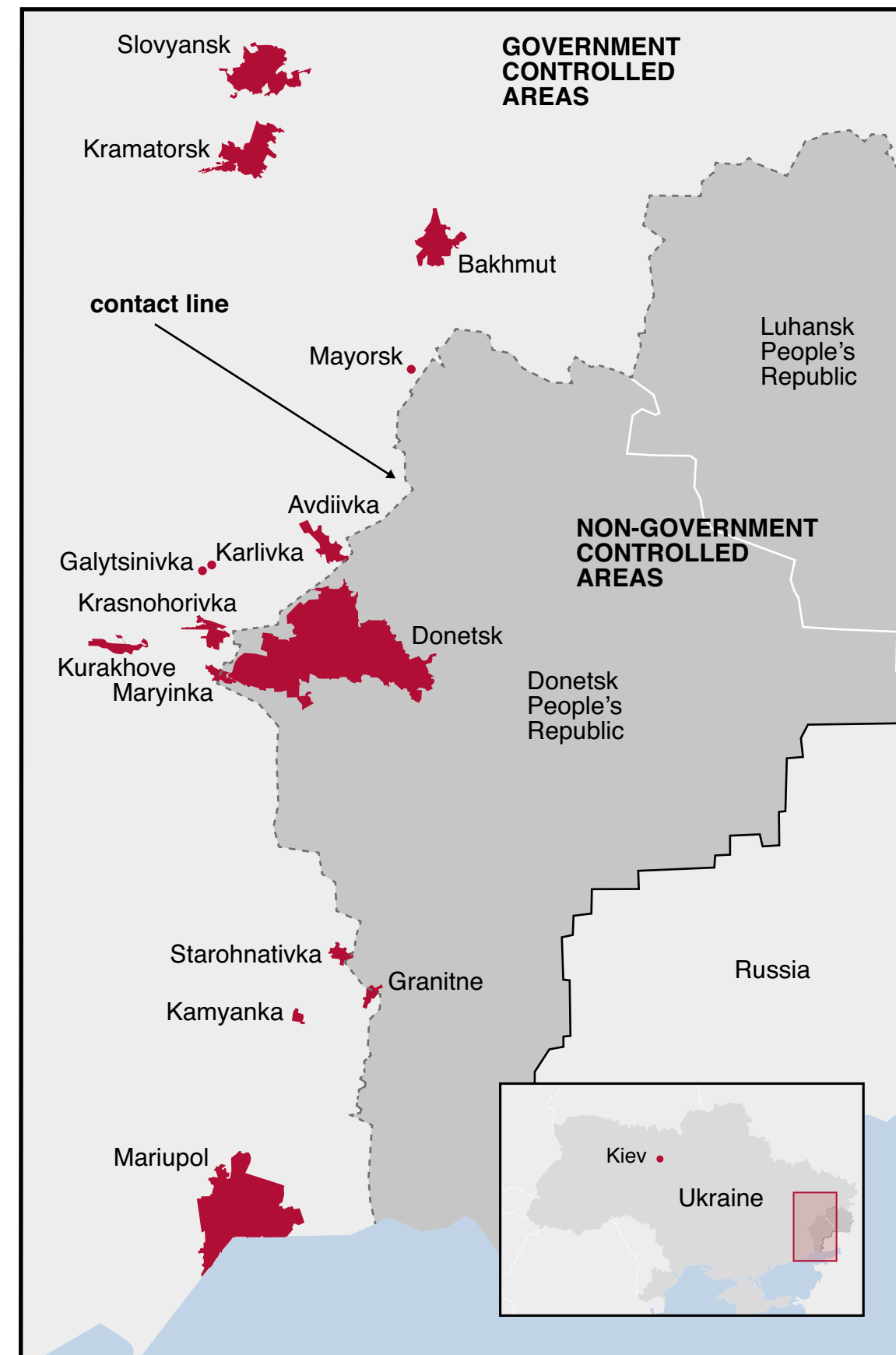
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## Donbass Region



▲  
North

Map depicts communities referenced in this report. It shows contact line as indicated in International Committee of Red Cross, “#New Normal,” April 2017, <https://www.icrc.org/en/document/newnormal-eastern-ukraine>.

20 km

# Summary and Recommendations

Since the armed conflict in the east of Ukraine began in 2014, the use of explosive weapons in populated areas has adversely affected the region’s health care system. Shelling, by which this report means use of ground-launched explosive weapons, has directly damaged hospitals, destroyed ambulances, and killed or injured health workers and patients. Shelling has also inflicted harm indirectly by shutting down infrastructure and creating travel risks. As a result, the quality, availability, and accessibility of health care—three elements of the right to health—have declined. This situation has exacerbated the conflict-related difficulties faced by civilians in the east of Ukraine. It also exemplifies one of the many humanitarian problems associated with using explosive weapons in populated areas.

Explosive weapons encompass a range of air-dropped and ground-launched weapons, including aircraft bombs, artillery projectiles, rockets, and missiles. Some types have wide area effects due to their broad radius of destruction, inaccurate delivery system, and/or delivery in salvos of multiple munitions. When explosive weapons with wide area effects are used in populated areas, they almost always cause humanitarian harm. They kill or injure civilians immediately through blast and fragmentation. They cause buildings to collapse and debris to fly, which can lead to more civilian casualties. In addition, explosive weapons have reverberating effects; for example, by damaging infrastructure, they can interfere with the operations of hospitals and schools as well as compel local people to flee.

Concern about the use of explosive weapons, especially with wide area effects, in populated areas has grown over the past decade. States, the United Nations (UN) secretary-general, UN bodies, the International Committee of the Red Cross (ICRC), and nongovernmental organizations

(NGOs) have all condemned the humanitarian harm caused by the practice. A proposal to develop an international political commitment on the topic has gained momentum with a series of meetings organized by Austria. In documenting the harm that shelling has caused to Ukraine's health care system, this report aims not only to shed light on the serious and ongoing suffering experienced by the civilians of one country but also to underscore the need to adopt such an overarching political commitment and end the use of explosive weapons with wide area effects in populated areas.

This report is the result of a collaboration between Harvard Law School's International Human Rights Clinic (IHRC) and PAX, a Dutch peace organization that is a co-founder of the International Network on Explosive Weapons (INEW). Part I of the report provides background on explosive weapons and the situation in Ukraine. Chapters 1 and 2 examine the humanitarian concerns raised by explosive weapons and the applicability of international humanitarian and human rights law. Chapter 3 provides an overview of the armed conflict in the east of Ukraine and the role played by explosive weapons. Chapter 4 provides an assessment of the Ukrainian health care system. Part II presents the findings of the report, which are based primarily on field research done in September 2016. Chapters 5 and 6 detail the direct and indirect harm that the use of explosive weapons in populated areas has inflicted on the region's health care system. Chapter 7 analyzes how this harm has adversely affected patient care.

## Armed Conflict and Health Care in Ukraine

The armed conflict in the east of Ukraine emerged from a series of protests, collectively known as the Euromaidan, about Ukraine's relations with the European Union (EU) and, by extension, with Russia. The civil unrest, which began in Kiev, spread east and escalated into armed conflict in 2014. Anti-maidan, pro-Russian armed groups seized territory and declared the Donetsk and Luhansk areas to be independent People's Republics, although they were not recognized as such by any UN member state. Ukraine responded with military force.

Over the past three years, all parties to the conflict have inflicted significant humanitarian harm through their widespread use in populated areas of explosive weapons, especially those with wide area effects. According to figures from Action on Armed Violence (AOAV), a UK-based NGO, the use of explosive weapons in populated areas caused more than 2,300 civilian casualties in Ukraine from 2014 to 2016. In 2015, a peace deal known as Minsk II established a buffer zone, requiring the withdrawal of certain explosive weapons. Minsk II has been only partially successful, however, and fighting has continued along the contact line.

Ukraine's health care system, which already fell below the standards of other parts of Europe, has suffered as a result of the conflict. For example, the contact line has made it difficult for civilians on the government controlled side to access the region's specialized hospitals located in or near Donetsk in the non-government controlled areas. Military checkpoints have prevented medical personnel from reaching their patients and patients from reaching nearby hospitals and clinics. Ambulances have reportedly come under small arms fire. Most relevant for this report, shelling has interfered with the provision of health care in a number of ways.



Empty benches stand outside a wing of Avdiivka City Hospital that was abandoned after two direct hits by explosive weapons.  
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## Effects of Explosive Weapons on Health Care

The use of explosive weapons in populated areas has directly harmed the health care system in the east of Ukraine. When explosive weapons have hit hospitals or exploded nearby, they have caused structural damage, shattered windows, and endangered personnel and patients. On June 3, 2015, for example, shelling in Krasnohorivka struck an ambulance substation, setting fire to the ambulance garage and adjacent neurology department. Staff members had to carry the patients, many of whom were immobilized, across the hospital grounds to the basement of another building as shells fell around them. Although no one died in this attack, the substation had yet to be repaired when IHRC-PAX researchers visited in September 2016.

Shelling has inflicted harm indirectly as well as directly, meaning that the health care system has felt the reverberating effects of the use of explosive weapons in populated areas. In all of the cities and towns IHRC-PAX researchers visited, shelling had damaged infrastructure, causing widespread and long-term interruptions to utilities essential to the provision of health care. Explosive weapons have caused power outages by cutting electric wires and knocking out transformers. They have interfered with water supplies by breaking water mains leading to hospitals. Explosive weapons have left medical facilities without heat because they severed hot water pipes and above-ground gas lines. They have also cut communications with hospitals and ambulance services by cutting phone lines and damaging cell phone towers. Ongoing shelling has delayed restoration of services by making it too dangerous for workers to complete repairs. In addition, new spikes in shelling, such as in Avdiivka in February 2017, have shut down services previously repaired.



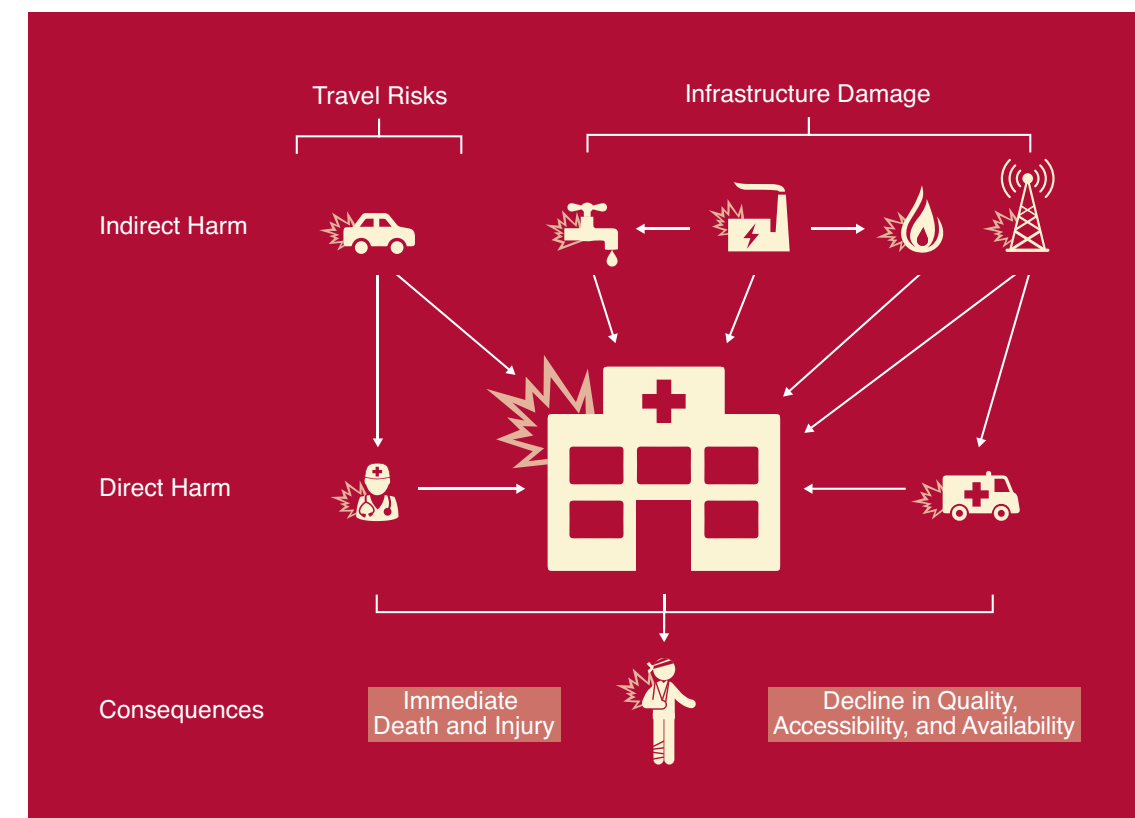


Explosive weapons shattered windows at Maryinka District Central Hospital in Krasnohorivka. While some windows had been replaced by September 2016, others consisted of broken glass and torn plastic sheeting.  
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Shelling has also caused indirect harm by making travel dangerous for medical personnel. While many health workers have risked their lives to reach the hospitals and clinics where they care for patients, shelling has at times made their journeys impossible. Some medical personnel have even felt compelled to leave the region altogether in order to protect themselves and their families. During periods of heavy shelling, the use of explosive weapons has prevented ambulance personnel from leaving their stations and providing emergency services to residents in need.

The direct and indirect harm caused by the use of explosive weapons in populated areas has had serious consequences for patient care. Quality has declined because hospitals have had to restrict their operations to confined spaces and treat patients in frigid temperatures. In addition, medical personnel have had to improvise in their treatment, doing surgery by candlelight, sterilizing equipment off site, and bringing their own water to work in buckets or bottles. The use of explosive weapons has also reduced the availability of health care. Many facilities have had to cut back on their services, send patients to distant hospitals for care, and rely on outside assistance from the military. Finally, shelling has created problems of accessibility. Civilians have often found it too dangerous to travel to hospitals or clinics, except in emergencies, and they have had trouble obtaining medications because security risks contributed to the closure of pharmacies in the region.

## Effects of Explosive Weapons on Health Care System and People It Serves



The web of direct and indirect harm caused by using explosive weapons in populated areas can kill and injure civilians immediately and cause a decline in the quality, accessibility, and availability of health care.

## Recommendations

To minimize the effects of fighting on the region's civilian population, parties to the armed conflict in the east of Ukraine should immediately:

- ◆ Cease the use of explosive weapons with wide area effects in populated areas, and
- ◆ Take precautions to avoid harming medical facilities, transport, and personnel as well as the infrastructure essential for proper health care.

To prevent future harm from the use of explosive weapons in any part of the world, states should:

- ◆ Cease the use of explosive weapons with wide area effects in populated areas, and
- ◆ Develop and sign on to a political commitment that seeks to minimize the harm caused by the use of explosive weapons in populated areas.

## **Operating under Fire:**

# **The Effects of Explosive Weapons on Health Care in the East of Ukraine**

**May 2017**

The armed conflict in the east of Ukraine has significantly affected the region's health care system and the people who depend on it. The use of explosive weapons in populated areas has caused much of the harm. This report, based on field research along the contact line between government and non-government controlled areas, documents the humanitarian impact of this method of warfare and calls on countries to commit to minimizing this impact in the future.

Explosive weapons encompass a range of munitions, including air-dropped bombs, artillery projectiles, rockets, and missiles. When such weapons have wide area effects and are used in cities and towns, they are likely to hit civilians and the infrastructure upon which their lives depend.

Since 2014, the use of explosive weapons in Ukraine has directly damaged hospitals, destroyed ambulances, and killed or injured health workers. It has also indirectly inflicted harm on the health care system by shutting down infrastructure—causing loss of electricity, water, heat, and communications—and creating travel risks for ambulances, medical personnel, and civilians in need.

The harm attributable to explosive weapons' use in populated areas has had serious consequences for patient care. It has infringed on quality, accessibility, and availability, which are three elements of the right to health.

*Operating under Fire* spotlights the conflict's impact on Ukraine's health care system and its people. It also makes the case for an international political commitment to prevent the harm caused by the use of explosive weapons in populated areas.



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